

Appl. No. : 09/514,999
Filed : February 29, 2000

AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows. Insertions are shown underlined while deletions are ~~struck through~~.

1 (cancelled)

2 (previously presented): The method according to Claim 10, wherein said nuclease is a nuclease contained in the yeast somatic components.

3 (previously presented): The method according to Claim 10, wherein the yeast somatic components are obtained from yeast selected from the group consisting of *Saccharomyces cerevisiae* and *Candida utilis*.

4 (currently amended): The method according to Claim ~~10~~15, wherein the decomposition step is conducted by digesting the yeast somatic components with nuclease added to a solution containing the yeast somatic components, at a pH value of 3 -10 and at a temperature of 10-70°C.

5 (currently amended): The method according to Claim ~~10~~15, wherein the decomposition step is conducted by hydrolyzing at 20-100°C the yeast somatic components with alkali added to a solution containing the yeast somatic components at a normality of 0.1-5N.

6 (previously presented): The method according to Claim 10, wherein the yeast somatic components are an extract obtained by physically crushing yeast using a high-pressure homogenizer and an ultrasonic disintegrator.

7 (previously presented): The method according to Claim 10, wherein the yeast somatic components are an extract obtained from yeast using hot water at a pH value of 4-8 and at a temperature of 90-100°C, wherein sodium chloride is added to a yeast suspension with a yeast concentration of 5-25% to make a salt concentration of 1-10%.

8 (previously presented): The method according to Claim 10, wherein the yeast somatic components are an extract obtained by autolyzing yeast.

9 (canceled)

10 (currently amended): A method of obtaining polyamines, comprising the steps of:
providing yeast somatic components selected from the group consisting of extracts obtained from yeast by physical crushing, extracts obtained from yeast by autolysis, extracts obtained from yeast with hot water, and yeast RNA compositions;

subjecting said yeast somatic components to a decomposition step comprising nuclease digestion or alkali hydrolysis of increasing the yield of polyamines recovered in a subsequent recovery step by approximately 2-3.2 times the yield of polyamines recovered in the subsequent recovery step without this decomposition step, under conditions where the yield with this decomposition step when continuing for approximately 15-18 hours is approximately 2-3.2 times the yield without this composition step, wherein said yeast somatic components are treated in solution with nuclease added in a concentration of approximately 1-2 mg/ml, at approximately 25-37°C, and at a pH of approximately 6-8, or said yeast somatic components are dissolved in a 0.3 N alkali solution at 37°C; and

recovering polyamines from ~~said~~the decomposed yeast somatic components produced.

11 (new): The method according to Claim 10, wherein the nuclease is selected from the group consisting of deoxyribonuclease I, nuclease P1, nuclease S1, phosphodiesterase I, ribonuclease A, ribonuclease B, ribonuclease T₁, ribonuclease T₂, and ribonuclease U₂.

12 (new): The method according to Claim 10, wherein the alkali is sodium hydrate or potassium hydroxide.

13 (new): A method of obtaining polyamines, comprising the steps of:

providing yeast somatic components selected from the group consisting of extracts obtained from yeast by physical crushing, extracts obtained from yeast by autolysis, extracts obtained from yeast with hot water, and yeast RNA compositions;

decomposing said yeast somatic components by nuclease digestion or hydrolysis, wherein said yeast somatic components are treated in solution with nuclease added in a concentration of about 1-2 mg/ml, at about 25-37°C, and at a pH of about 6-8, or said yeast somatic components are dissolved in an about 0.3 N alkali solution at about 37°C, to dissociate substantially all of polyamines included in the yeast somatic components; and

recovering polyamines from the decomposed yeast somatic components produced.

14 (new): A method of obtaining polyamines, comprising the steps of:

providing yeast somatic components selected from the group consisting of extracts obtained from yeast by physical crushing, extracts obtained from yeast by autolysis, extracts obtained from yeast with hot water, and yeast RNA compositions;

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subjecting said yeast somatic components to a decomposition step comprising nuclease digestion or alkali hydrolysis of increasing the yield of polyamines recovered in a subsequent recovery step by approximately 2-3.2 times the yield of polyamines recovered in the subsequent recovery step without this decomposition step, under conditions where said yeast somatic components are treated in solution with nuclease added in a concentration of approximately 1-2 mg/ml, at approximately 25-37°C, and at a pH of approximately 6-8, or said yeast somatic components are dissolved in a 0.3 N alkali solution at 37°C; and

recovering polyamines from the decomposed yeast somatic components produced.

15 (new): A method of obtaining polyamines, comprising the steps of:

providing yeast somatic components selected from the group consisting of extracts obtained from yeast by physical crushing, extracts obtained from yeast by autolysis, extracts obtained from yeast with hot water, and yeast RNA compositions;

decomposing said yeast somatic components by nuclease digestion or alkali hydrolysis to separate polyamines from high-molecular weight substances in the yeast somatic components to a degree achieved when the yeast somatic components are treated for about 15-18 hours in solution with nuclease added in a concentration of about 1-2 mg/ml, at about 25-37°C, and at a pH of about 6-8, or in an about 0.3 N alkali solution at about 37°C; and

recovering polyamines from the decomposed yeast somatic components produced.